UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
CONTINO, PAUL F

ART UNIT	PAPER NUMBER
2114	

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _28 February 2002_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-29_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) _1-6,8-11 and 29_ is/are allowed.

6) ☒ Claim(s) _7,12-14,17-24, 26-28_ is/are rejected.

7) ☒ Claim(s) _15-16 and 25_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _28 February 2002_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities: The second to last sentence in paragraph [0012] states "The controller is may also be configured ... " Appropriate correction is required.

Claim Objections

2.   Claim 2 objected to because of the following informalities: use of "is" between "non-read list" and "said copying." Appropriate correction is required.

Allowable Subject Matter

3.   Claims 1-6, 8-11, and 29 allowed.

The following is an examiner's statement of reasons for allowance:

Claims 1-6, 8-11 allowed in reference to the specific limitation in claim 1: "if said copying is unsuccessful, adding the address of the new portion to the non-read list." When this limitation within claim 1 is read in context with the entirety of claims 1-6, and 8-11, the novelty of the invention is apparent.

Claim 29 is allowed in similar fashion with respect to the referenced limitation in claim 1: "means for listing the second portion on a non-read list if data stored to the first portion is not successfully copied to the second portion." When this limitation is taken in consideration of the whole of claim 29, the novelty of the invention is apparent.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4.   Claim 7 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

5.   Claims 15, 16 and 25 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6.   Claim 7 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. Claim 7 recites the limitation "wherein said restoring comprises

restoring the data to the other mirrored storage media in the group." There is insufficient

antecedent basis for this limitation ("the other mirrored storage media") on the claim.

7.   Claims 26, 27, and 28 rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention. There is no reference to an independent claim;

in addition to the reference of non-prior claim 28 by claims 26 and 27.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8.   Claims 12-14,17-24 rejected under 35 U.S.C. 102(e) as being anticipated by

Schibilla (U.S. Patent 6,384,999).

As in claim 12, Schibilla discloses a storage medium comprising a plurality of portions, wherein each portion is identified by an address (Fig. 1 and 2; abstract; column 5 line 23 through column 6 line 15);

an access mechanism configured to access data stored on the storage medium (Fig. 1; column 5 lines 30-39);

a controller coupled to control the access mechanism, wherein the controller is configured to receive a command to access data at a first address and to responsively control the access mechanism to access a first portion of the storage medium (Fig. 1; column 5 lines 25, 35-39);

wherein the controller is configured to inhibit read access to the first portion if the first portion's address is listed on a non-read list (Fig. 1 and Fig. 3; column 5 lines 35-39, column 6 lines 38-49. Schibilla discloses detecting a "marginally defective data site" (first portion) and further determining if the data site is still able to be read from successfully. It is implied that read access to the data site is inhibited during this process, and is "listed" internally to allow for Schibilla's method of data site reliability testing.);

wherein the controller is configured to remove the first portion's address from the non-read list in response to a successful write to the first portion (Fig. 3 #96 column 7 lines 48-53. Upon Schibilla's successful rewriting to a marginally defective data site, the data site is no longer considered as erroneous.).

As in claim 13, Schibilla discloses wherein the non-read list is stored on the storage medium (Fig. 1, 2; column 5 line 40 through column 6 line 28. Plurality of

storage devices as disclosed by Schibilla is used to store information about his marginally

defective data sites which implies storage of "non-read list.").

As in claim 14, Schibilla discloses wherein the storage device is a hard drive, and

wherein the first portion is a first sector of a hard disk platter (Fig. 1; column 5 lines 23-

25, 40-45, column 5 line 65 through column 6 line 5, column 6 lines 39-42).

As in claim 17, Schibilla discloses wherein the controller is configured to

generate an error indication in response to inhibiting read access to the first portion (Fig.

3 #97; column 7 lines 54-57. Schibilla clearly indicates a response to an error with his

disclosure of the events following an unsuccessful data site recovery.).

As in claim 18, Schibilla discloses a host computer system including a memory

and a processor (column 5 lines 26-32);

a storage array coupled to the host computer system, wherein the storage array

includes a plurality of storage devices, wherein a first storage device of the plurality of

storage devices has a non-read list (Fig. 1 and 2; column 5 line 40 through column 6 line

28. Plurality of storage devices as disclosed by Schibilla is used to store information

about his marginally defective data sites which implies storage of "non-read list.");

a controller coupled to manage the non-read list (Fig.1; column 5 lines 25 30);

wherein an application program stored in the memory and executed by the

processor is configured to generate a read command to read data from a first portion of a

storage medium included in the first storage device (column 5 lines 26-30, column 6 lines 41-49, column 9 lines 65-76);

wherein if an address of the first portion is listed on the non-read list, the controller is configured to inhibit performance of the read command, wherein the controller is configured to remove the address of the first portion from the non-read list in response to a successful write to the first portion (Fig. 1 and Fig. 3; column 5 lines 35-39, column 6 lines 38-49. Schibilla discloses detecting a "marginally defective data site" (first portion) and further determining if the data site is still able to be read from successfully. It is implied that read access to the data site is inhibited during this process, and is "listed" internally to allow for Schibilla's method of data site reliability testing; Fig. 3 #96 column 7 lines 48-53; column 10 lines 17-27. Upon Schibilla's successful rewriting to a marginally defective data site, the data site is no longer considered as erroneous.)

As in claim 19, Schibilla discloses wherein the controller is configured to generate an error indication in response to inhibiting performance of the read command (Fig. 3 #97; column 7 lines 54-57. Schibilla clearly indicates a response to an error with his disclosure of the events following an unsuccessful data site recovery.).

As in claim 20, Schibilla discloses wherein the non-read list is stored on the storage medium (Fig. 1 and 2; column 5 line 40 through column 6 line 28. Plurality of storage devices as disclosed by Schibilla is used to store information about his marginally defective data sites which implies storage of "non-read list.").

As in claim 21, Schibilla discloses wherein the controller is included in a storage device controller included in the first storage device (Fig. 1 #32; column 5 lines 25-35. Schibilla discloses a "control system" (storage device controller) which includes a controller for the HDA (storage device).).

As in claim 22, Schibilla discloses wherein the controller is included in an array controller coupled between the host computer system and the storage array (Fig. 1 #32 and #46; column 5 lines 25-50).

As in claim 23, Schibilla discloses wherein the controller is implemented in program instructions stored in the memory and executed by the processor (column 5 lines 37-40).

As in claim 24, wherein the storage device is a hard drive, and wherein the first portion is a first sector of a hard disk platter (Fig. 1; column 5 lines 23-25, 40-45, column 5 line 65 through column 6 line 5, column 6 lines 39-42).

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Contino whose telephone number is (703) 605-4316. The examiner can normally be reached on Monday-Friday, 7:30 am - 5:00 pm, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PFC
August 9, 2004

SCOTT BADERMAN
PRIMARY EXAMINER